# Lessons from the ENERGY STAR Experience



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#### Overview

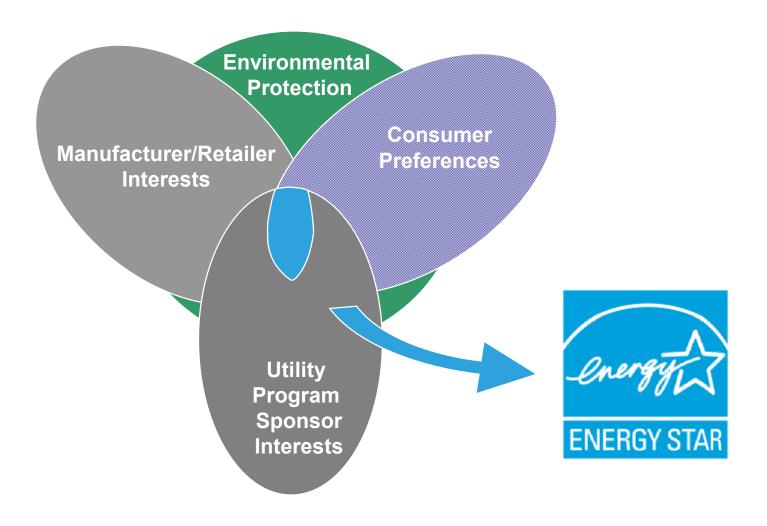


- Experience with 15+ voluntary programs that promote environmentally friendly actions
  - ENERGY STAR is one
- ENERGY STAR is successful
  - become a model many want to build upon
- To effectively build upon it must
  - understand roots of ENERGY STAR success
    - stem from particular market conditions
  - understand lessons learned and costs
  - assess relevance to own problem

### Overview of ENERGY STAR

- Residential Effort
  - promote labeled products
  - promote system-wide improvements
- Commercial/Institutional/Industrial Effort
  - superior energy management
    - contract with EPA
    - organizational commitment
    - standardized measurement
    - recognition for energy savings
  - labeled products play minor role

## Success Requires Finding/Building Upon Intersection of Interests



## From Consumer Standpoint

- Products must conform to lessons from green marketing
  - Green marketing experience shows success only when product delivers desired functions and environmental benefit is extra.
  - Tie goes to the dolphin
  - If you buy this product you will save water and energy without sacrificing quality of life?
- Products must deliver on savings claims
  - Product must deliver savings by itself (feasible for labeling)
  - If there is a large consumer behavior element to product savings, product is less appropriate for savings since label can not deliver on performance

## From Key Partner Standpoints

#### Retailers

- Want sufficient labeled products throughout store to warrant company promotions
- Want Government to carry consumer education message and credibility of label

#### Manufacturers

- Want Initiative to highlight high-profit products
- Show concern that some products can negatively reflect on theirs

#### Energy Program Sponsors

Need real savings -- must continually justify program

## From the Government Standpoint

- Substantial environmental benefit
  - voluntary programs are expensive
  - want good use of taxpayer's dollar from beginning
- Allows for unified message across all products
  - save energy
  - no sacrifice
- Message is consistent with Agency
  - can protect the environment and maintain quality of life

## Lessons from ENERGY STAR Labeling after 10 vears

- Major successes to date
  - Where technology fix invisible to consumer
    - TVs, VCRs, Audio, Office Equipment
  - Where products offer desirable consumer benefits
    - appliances
  - Where regional players using ENERGY STAR to standardize/coordinate local programs
    - \$1 billion spent across the country promoting energy efficiency
- People are not motivated to retire products early
  - Encouraging early retirement of AC equipment showed limited success (without sizable cash incentives)
- Little benefit with products only a little better than national standards

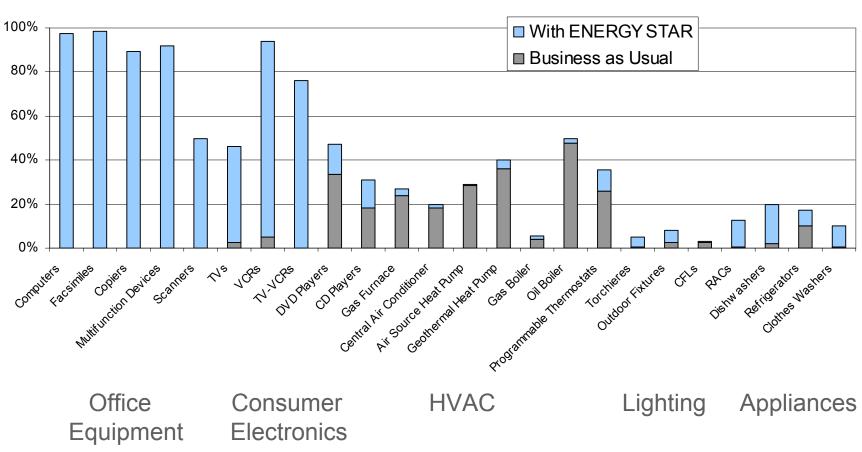
#### Roots of Success

- Large potential climate benefits
  - 30% savings in many homes / buildings over standards
- Big potential market place
  - More than 50% of people will choose to help the environment (and save money) if have better info on what to do AND there are no tradeoffs
- Compelling Government message
  - Improving environment thru efficiency saves money while often enhancing performance, comfort
- Appropriate Government role
  - Market barriers surmountable with information
  - Can reduce transaction costs and perceptions of risk
- Selling efficiency consistent with market incentives for key market players
  - Efficient products often offer greater quality, performance, comfort
  - Selling more efficient products often provides more profit



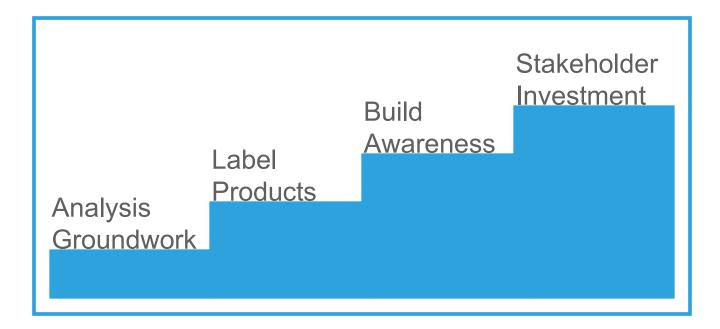
### How the Market Has Moved

#### 2000 Market Penetration



## Lessons (cont)

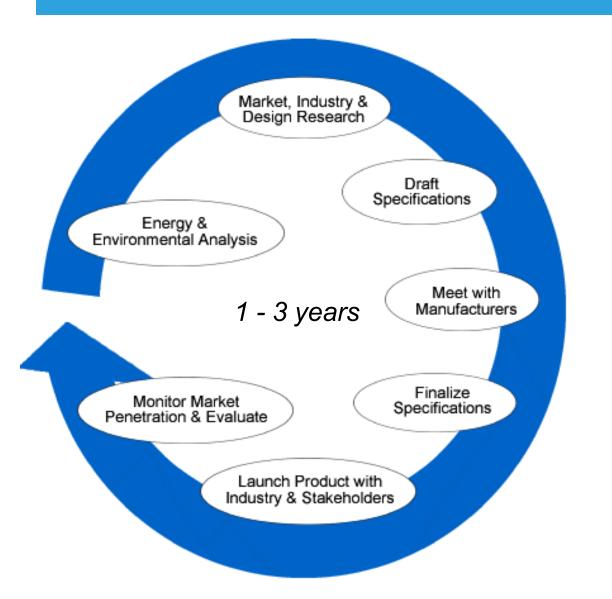
- Building relevance of a label is hard
  - awareness is at 40% after 10 years
  - BUT understanding and trust remain challenges
- Building program is many staged process



## **ENERGY STAR is Expensive**

- Setting performance specifications
  - testing methods
- Administration
  - registering manufacturers to use label
- Consumer Outreach
  - consumer attention hard to get; crisis driven
- Clear Consumer Information
  - up to date product lists
- Protecting Integrity of Label
  - ensuring that only qualifying products carry the label
  - checking for misuse of label
  - product testing
- Evaluation

## Defining Specifications Takes Resources





Example: CFLs

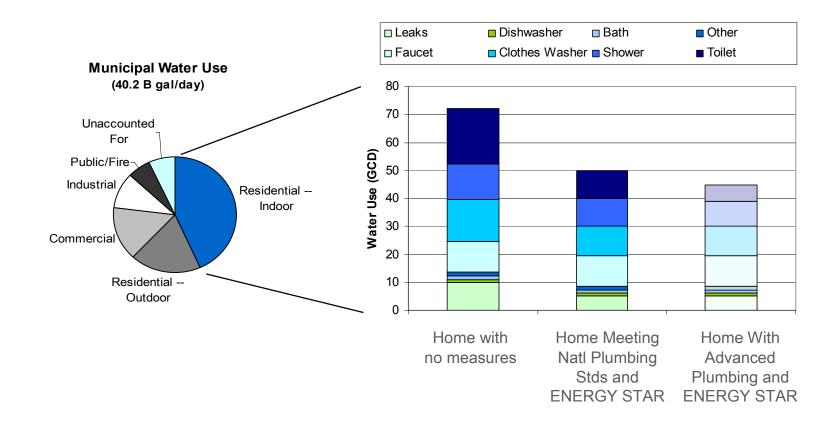
Agencies have spent years investing in applied research -- developing new tests to address consumer issues.

## Example: Saying No

- Efficient autos do not fit ENERGY STAR program today
  - ENERGY STAR stands for efficiency in addition to desired features and performance
  - Efficient cars currently compromise features and/or performance
  - Perception of safety issues with small cars remains an issue
- Unclear what information barrier is being fixed
  - consumers have clear info on MPG of autos and pay fuel bill frequently
  - consumers may be purchasing the vehicles they want
- Market structure does not support sales of efficient vehicles
  - labeling does not overcome financial disincentives
- Questionable benefits and and questionable use of government resources

Other examples: Motors, commercial windows

#### Look at Water Use in the Home



#### Not much to get after national standards and ENERGY STAR

Source: Dickinson, Maddaus, and Maddaus Standards (2002); GAO (2000)

#### Look at Other End Uses

#### <u>Issues for Label</u>

Options for Home outdoor water use

Choice of Plants

Landscape Planning
 Product or practice?

Choice of Irrigation

Automatic systems
 Manual systems
 Quality of service
 Role of education

Controls / Sensors
 Do products alone provide savings?

Reuse/recycling

Options for Comm/Ind/Public

Targeted Toilet/Urinal Replacements
 Role of standards

Cooling Tower Improvements
 Product?

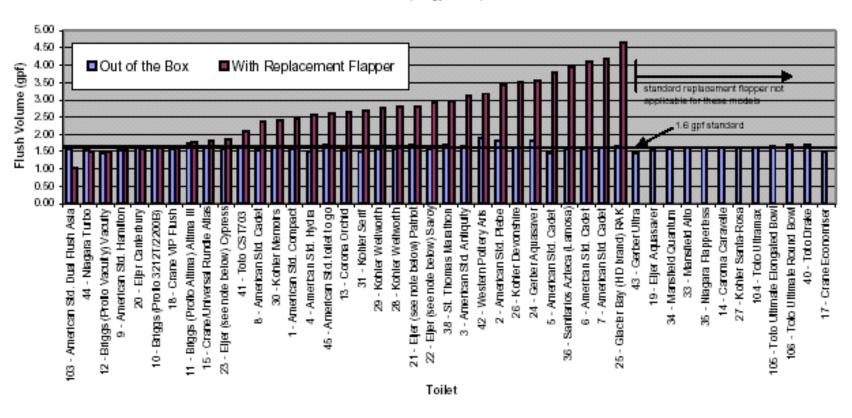
Large User AuditsPractice?

Large Landscape AuditsPractice?

Better metering

## Other Important Issues

Figure 2 FLUSH VOLUME DISTRIBUTION (1.6 gpf units)



## Summary

- Saving Water is Important
- Successful effort is likely combination
  - Behavior
  - Services
  - Policies
- Can build upon ENERGY STAR for DW and CW
- Work needed to determine most effective water savings solutions
  - Labeling is expensive / requires particular market conditions / can backfire in the market place

Let's Do It Right!